

Method of estimating the temperature of the air in the internal cavity of a tire and application to the detection of abnormal operating of a running-flat system

ABSTRACT

A method of estimating the temperature of the air in the internal cavity of a tire in which:

prior to normal operation, a series of running tests are carried out on the tire provided with a means of measuring the internal air temperature at given speeds V and external temperatures T_{amb} , the tire supporting a given load and the cavity being at a given internal relative pressure, and an adjustment is made to a function giving the temperature of the internal air T_{ai} according to the parameters of speed and external temperature; and

in normal operation, the tire equipping a vehicle under the above conditions of load and relative pressure, the internal air temperature is estimated according to the speed of the vehicle and the temperature external to the vehicle.

The method is applied to the detection of abnormal operating in particular of a running-flat system.